DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-009610
Date Inspected: 19-Oct-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 645
OSM Departure Time: 1845
Location: Shanghai, China

CWI Name: Xu Xian Ping

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG & TOWER Components

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector, Sandeep Kumar was present during the times noted above for observations relative to the work being performed.

BAY 1

This QA Inspector observed the following work in progress:
FCAW process Repair welding of weld joint # 001 located on Counter Weight CW002B – PP086. Welder is identified as 219188. ZPMC QC is identified as Xiang Feng Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U4b – F – 1.

FCAW process Repair welding of weld joint # 002 located on Counter Weight CW002B – PP092. Welder is identified as 219188. ZPMC QC is identified as Xiang Feng Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U4b – F – 1.

BAY 2

This QA Inspector observed the following work in progress:
FCAW process welding of weld joint # 018 located on FB3028 – 001. Welder is identified as 045209. ZPMC QC is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132 – 3.

FCAW process welding of weld joint # 039 located on FB6052 – 001. Welder is identified as 058245. ZPMC QC is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U4b – F.

FCAW process welding of weld joint # 008 located on FB3028 – 001. Welder is identified as 045209. ZPMC QC is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2133.

BAY 3

This QA Inspector observed the following work in progress:
FCAW process welding of weld joint # 012 located on Longitudinal Diaphragm LD006 – 005. Welder is identified as 208035. ZPMC QC is identified as Yin Donghai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – Tc – P4 – F.

FCAW process welding of weld joint # 009 located on Longitudinal Diaphragm LD010 – 001. Welder is identified as 044824. ZPMC QC is identified as Yin Donghai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2133.

FCAW process welding of weld joint # 005 located on Longitudinal Diaphragm LD006 – 005. Welder is identified as 208035. ZPMC QC is identified as Yin Donghai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132 – 3.

BAY 5

The following NDT inspection carried out as per the ZPMC submitted Notification No. 004428
Magnetic Particle Testing
This QA inspector performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The member is identified as OBG Component. The weld designations reviewed are as follows:
1. 10TR1 – 004 – 003
2. 10TR2 – 001 – 003
3. 10TR2 – 019 – 003
4. 10TR2 – 020 – 003

5. 10TR2 – 021 – 003
6. 10TR2 – 017 – 004
7. 11TR1 – 019 – 003
8. 11TR1 – 021 – 004

Ultrasonic Testing

This QA inspector performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows:

1. BK001 – 030 – 002; 004; 010; 046 – Green Tag # 009768
2. BK001 – 029 – 002; 004; 010; 046 – Green Tag # 009769
3. BK001 – 028 – 002; 004; 010; 046 – Green Tag # 009770
4. BK001 – 027 – 002; 004; 010; 046 – Green Tag # 009771
5. BK001 – 026 – 002; 004; 010; 046 – Green Tag # 009772
6. BK001 – 025 – 002; 004; 010; 046 – Green Tag # 009773
7. 11TR1 – 018 – 004
8. 11TR2 – 022 – 004
9. 11TR2 – 028 – 004
10. 11TR2 – 023 – 003
11. 11TR2 – 025 – 004
12. 11TR2 – 027 – 004
13. 11TR1 – 019 – 004
14. 11TR1 – 021 – 003

This QA Inspector observed the following work in progress:

FCAW process welding of weld joint # 007 located on Traveler Rail 10TR3 – 028. Welder is identified as 068858. ZPMC QC is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U5 – F.

FCAW process welding of weld joint # 008 located on Traveler Rail 10TR3 – 037. Welder is identified as 215689. ZPMC QC is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

FCAW process welding of weld joint # 014 located on Traveler Rail 10TR3 – 036. Welder is identified as 020433. ZPMC QC is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U5 – F.

This QA Inspector observed the following work not in compliance:

During random visual inspection of Traveler Rails this QA observed a Complete Joint Penetration (CJP) T-joint weld preparation that did not appear to comply with the contract documents. QA observed a notch approximately 5mm deep in the joint root area. This joint has already been fit and tack welded making the discontinuity inaccessible for proper repair. AWS D1.5 2002 section 3.2.1 specifies “The surfaces and edges to be welded shall be smooth, uniform and free from fins, tears, cracks and other discontinuities which would adversely affect the quality or strength of the weld”. This joint is identified as 10TR3-034-014. This QA notified ZPMC QC identified

as Mr. Meng Linnan and ABF inspector identified as Mr. Yu kim of the above issue and that an incident report will be generated.

BAY 6

Tower

This QA Inspector observed the following work in progress:
SMAW process welding of weld joint #1B located on Tower Strut WD1 – A305 – 77M – 4. Welder is identified as 048617. ZPMC QC is identified as Zhao Chen Sun. The welding variables recorded by QC appeared to comply with the WPS – 485 – SMAW – 2G (2F) – FCM – Repair – 1.

SMAW process welding of weld joint #1A located on Tower Strut WD1 – A305 – 77M – 2. Welder is identified as 053753. ZPMC QC is identified as Zhao Chen Sun. The welding variables recorded by QC appeared to comply with the WPS – 485 – SMAW – 2G (2F) – FCM – Repair – 1.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No Relevant Conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang - 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Kumar,Sandeep	Quality Assurance Inspector
Reviewed By:	Hall,Steven	QA Reviewer